A SUCCESSFUL CASE OF TRANSPERITONEAL URETERO-LITHOTOMY.[1]

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REMOVAL of renal calculi impacted in the ureter by the transperitoneal, subperitoneal, or lumbar route is perhaps sufficiently uncommon to warrant publication of such cases. I believe that only three or four instances of transperitoneal removal have been recorded.

A woman, aged fifty-seven years, was admitted to the Woman's Hospital of Philadelphia in December, 1894, with history of attacks of renal colic from the time she was eleven years old. At first the attacks occurred, according to her statement, about every week. Subsequently they became less frequent, occurring not oftener than once in two or three months. Seventeen years ago she noticed that the urine after these attacks of pain contained a reddish sediment. She, on a number of occasions, passed small stones, which were about the size of a flaxseed. Recently she had had weekly attacks of pain, and the urine passed the day following had contained large quantities of pus. The pain was felt in the left side over the region of the kidney, where tenderness on pressure existed. During the paroxysms, the pain radiated downward and forward towards the bladder. An examination of the urine after admission showed that she passed forty-eight ounces in twenty-four hours. The urine was of an acid reaction, had a specific gravity of 1010, and contained some albumen, but no sugar. It contained urea 1 per cent., pus 3 per cent.

Attacks of severe renal colic occurred every two or three days, and gave so much pain that my colleague, Dr. Anna M. Fullerton,

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dilated the urethra and catheterized the ureters by touch. From the right ureter an ounce and a half of clear urine was drawn. The left ureter admitted the catheter for about an inch and a half, when an obstruction was met. No fluid was obtained from this ureter. The urine obtained from the right ureter showed neither pus nor casts. A specimen taken from the bladder itself contained a few pus-cells.

About a week later I explored the kidney and ureter by lumbar incision. The kidney was very small and was thoroughly examined with my finger passed over both its anterior and posterior surfaces. I could feel no stone in the kidney proper, nor in the pelvis. The organ was only about four inches long and had a normal appearance and feel. The ureter was exposed about one inch below the pelvis of the kidney, and was found to be greatly enlarged. It was about as wide as my forefinger and had thick walls. I made a small longitudinal opening in it and passed a rubber bougie downward for about ten inches. The bougie then met an obstruction. The finger introduced into the vagina readily felt the end of the bougie about two inches above the bladder.

The urethra was then dilated; and my finger introduced into the bladder detected the bougie within the ureter. Vaginal touch then discovered what seemed to be a small growth high up in the pelvis behind the uterus and to its left. This had never been discovered during the vaginal examinations made before operation. Dr. Fullerton then passed by touch a ureteral catheter from the bladder. The two instruments came within about half an inch of each other, but they could not be brought into contact, though the finger in the vagina could feel both instruments.

This examination led me to believe that there was a small tumor pressing upon the ureter and causing a valve-like stricture, which at times permitted the dammed up pus and urine to escape. I believed that the tumor was rather small, since it was only discovered by vaginal examination after it had been pressed downward by the bougie introduced into the ureter by the lumbar incision. The mass seemed to be about the size of an English walnut. I concluded that abdominal section would subsequently be required, and therefore closed the ureteral wound with four silk sutures applied in the manner of Lembert. A small drainage-tube was placed in the posterior end of the oblique lumbar wound. The urethra, which had been lacerated by the dilatation, was repaired by sutures introduced by Dr. Fullerton.

The wounds healed promptly. The pain which the patient had suffered became less, and was felt much lower down in the abdomen than previously. She was discharged with directions to return at a later period for laparotomy to remove the small tumor which was supposed to be pressing upon the ureter.

She was readmitted on April 18. A mass was still felt in the left broad ligament, close to the pelvic wall. The uterus was movable and in good position. The daily amount of urine was forty-four ounces. It was on one occasion acid, without albumen; and on another neutral, with albumen and pus present.

On April 26, 1895, an incision in the median line of the abdomen was made and the pelvis explored. A thickening was felt in the left broad ligament close to the pelvic wall, but no tumor was found pressing upon the ureter as I had expected. The left ovary was small, sclerosed, and movable. I determined, therefore, to cut down upon the ureter to see whether there was any stricture from tumor in the wall, or other inflammatory exudate occluding its calibre. I cut through the peritoneum, lifted up the ureter, and made a small opening in it, protecting the surrounding parts as much as possible from any urine that might escape. The lumen seemed free from urine, and a steel uterine sound, used as a probe, was readily passed downward into the bladder. Its presence here was proved by contact with a urethral sound introduced into the bladder. I then used the same instrument to explore the ureter upward, and almost immediately came in contact with a hard substance, which on impact gave the characteristic click of stone.

By pressure upon the ureter, beginning above the stone, I caused it to be extruded through the opening already made. The stone was the shape of a large olive pit, and measured seven-eighths of an inch in length, and about half an inch in its broadest part. The opening in the ureter was closed with silk sutures; the peritoneum over the ureter brought together with continuous catgut sutures. A split in the broad ligament was stitched with catgut. The abdominal cavity was kept uncontaminated during these manipulations, and could have been closed with propriety without drainage as the peritoneum was not soiled. A drainage-tube, however, was put in because of the possibility of the sutures not holding, though I really had no doubt of their being able to keep the ureteral wound closed.

The patient at the present time, which is a month after operation, has had no recurrence of pain, and has made an uneventful recovery. The urine about ten days ago showed a little pus.

The facility with which the operation was done and the rapid recovery demonstrate how satisfactorily removal of stone from the ureter can be thus accomplished. It is evident that the stone was not very tightly fastened within the ureter, though it is probable that it did not move during the ordinary occupations of the patient. After it had been pushed down by the rubber bougie introduced at the lumbar incision, the pain was felt at a lower region than previously. This would seem to indicate that the calculus occupied pretty much the same position all the time until displaced by the bougie which I introduced through the wound. It was the bulging produced by the stone thrust into the lower part of the ureter which gave the impression of a small tumor which we felt through the vaginal wall. This was not observed in previous vaginal examinations, because the stone was then situated at a higher point.